



Patuxent Science Meeting 2004 Poster Abstract

Resident Canada Geese Grazing Impacts Urban Reconstructed Freshwater Tidal Wetlands

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In 2000, portions of Kingman Lake along the Anacostia estuary in Washington, DC were restored to emergent freshwater tidal wetlands through a project funded by the U.S. Army Corps of Engineers (COE). A hydraulic dredge was used to pump a slurry of Anacostia channel sediments into two separate containment cells at Kingman. Following dewatering and consolidation the resultant sediment flats covered about 35 acres and were planted with approximately 700,000 plants comprising 6 native species. Volunteer plants also began to grow from the soil seed bank as well as from propagules carried in by water and air. Much of the planted areas were surrounded by corrals of light plastic fencing to exclude geese and ducks, which browsed the new plantings.

As a component of this reconstruction project the Army Corps of Engineers established funding for 5 years of post-reconstruction monitoring for two elements: food chain accumulation of contaminants (to be conducted by the Fish Wildlife Service) and vegetation establishment. The USGS Patuxent Wildlife Research Center (PWRC) and the University of Maryland Biological Resources Engineering Department (U. of Md.) are responsible for monitoring the establishment and growth of vegetation and related factors. The goals of the project are to measure and evaluate several site resources and processes to document both the status and the degree to which the marsh achieves a wetland condition similar to what might be expected compared to local and reference wetlands (i.e., emergent freshwater tidal wetland habitat).

Belt transects measuring 35 m by 1 m were used to monitor vegetation cover. Eighteen transects were established at Kingman; seventeen transects were established in the comparison wetlands (Kenilworth Marsh, an urban freshwater tidal marsh on the Anacostia which was reconstructed in 1993; Dueling Creek, the last remaining section of freshwater tidal marsh on the Anacostia; and Patuxent Marsh, a similar nearby freshwater tidal wetland). Vegetation cover was monitored in July and September of 2000, and May, July, and September in 2001. Although repeated measures Analysis of Variance tests are not yet complete, the descriptive statistics and an initial interpretation for Vegetative Cover and Species Richness through 2003 are provided.